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# AIR QUALITY IMPLEMENTATION PLAN FOR THE STATE OF ALASKA

## VOLUME III: PERMIT SYSTEM

DECEMBER 1971

Prepared for the

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

TRW
SYSTEMS GROUP

ONE SPACE PARK • REDONDO BEACH, CALIFORNIA 90278

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The Alaska Permit System was designed to provide the mechanisms and procedures by which the State Department of Environmental Conservation and local air pollution control agencies can monitor and control both new and existing sources of air pollution. The report discusses the following aspects of this system: (a) permit system requirements, (b) permit unit, (c) registration, (d) authority to construct - permit to operate, (e) processing of permit applications, (f) hearings, (g) source surveillance, (h) air quality control jurisdictions, and (i) data management.

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# 1.0 OVERVIEW

The intent of the Alaska Permit System is to provide the mechanisms and procedures by which the State Department of Environmental Conservation (DEC) and local Air Pollution Control Agencies can monitor and control both new and existing sources of air pollution. To this end, the Permit System was designated after careful review of the existing and proposed APCA requirements and capabilities and after consideration of the existing and proposed sources in the State. The Permit System was also designed to fulfill the general requirements delineated in the Federal Register, August 14, 1971, Vol. 36, No. 150, Sections 420.18, Review of New Sources, and 420.19, Source Surveillance.

The features of the Permit System will allow, in accordance with Alaska Statute 46.03.020, the DEC and the local Air Pollution Control Agencies to:

a. Establish whether existing sources are in compliance with the applicable Rules and Regulations or, if not in compliance, are undertaking action to comply.

b. Determine prior to initiation of construction whether new or modified sources will comply with applicable Rules and Regulations and will not interfere with the attainment or maintenance of a National Ambient Air Quality Standard (NAAQS).

c. Assure that the appropriate Air Pollution Control Agencies will be able to control and maintain air quality in accordance with NAAQS by limiting, if necessary, the nature, location, and number of new emission sources.

d. Provide, through source registration, source emission and other data from which to estimate air quality trends and generate emission inventories.

e. Provide the control agencies with the ability to approve or disapprove the construction, modification, and operation of sources based on air quality considerations.

# 2.0 PERMIT SYSTEM REQUIREMENTS

## 2.1 REGISTRATION REQUIREMENTS

Each facility, either existing or new, as defined in Appendix A shall be required to submit a registration form to the appropriate Air Pollution Control Authority (APCA) if its capacity is equal to or exceeds values indicated in Column I of Tables 2-1 and/or 2-2. The values listed correspond to emissions of 5 tons per year of total uncontrolled air pollutants. The registration requirement will be waived for facilities required to obtain a Permit to Operate.

## 2.2 PERMIT REQUIREMENTS

Each facility, either existing or new, as defined in Appendix A shall be required to obtain a Permit to Operate or, if applicable, an Authority to Construct if its capacity is equal to or exceeds the values indicated in Column II of Tables 2-1 and/or 2-2. These values correspond to 25 tons per year of uncontrolled particulates or $SO_x$ and 100 tons per year of uncontrolled $NO_x$ CO, or hydrocarbons. Tables 2-1 and 2-2 are intended to be indicative of those sources which will be required to obtain permits or registration. Sources having a variety of processes or fuel combustion emissions should consult with the APCA if there is any question concerning the requirement to register. These tables were developed from the emission factors as published by the EPA and will be revised as newer information becomes available.

### 2.2.1 Permit Requirements - New or Modified Sources

#### 2.2.1.1 Authority to Construct

In order to build or modify facilities which have the potential to emit particulate matter, vapor, gas, or any combination thereof, it will be necessary to obtain an Authority to Construct in accordance with the requirements of the Administrative Code of the State of Alaska as proposed in this Implementation Plan (see Regulations Volume). In order to operate such a facility after it has been built or modified, a Permit to Operate must be obtained Both the Authority to Construct and Permit to Operate requests are submitted at the same time and with

one complete application. However, the Authority to Construct and Permit to Operate will be granted in sequence.

An application for Authority to Construct and Permit to Operate shall be submitted to the appropriate APCA having jurisdiction over sources in that region of Alaska. The APCA will review the application and will determine whether or not the proposed facility is designed and will be operated in accordance with the requirements of the State of Alaska or its own (local) statutory authority. An affirmative decision will result in the granting of Authority to Construct, which gives the applicant the right to build the facility, but only according to specifications submitted as part of the application. If the application is rejected, the applicant will be informed as to the reasons for rejection and will be prohibited from building or modifying the facility as designed. The applicant may resubmit the application after necessary revisions have been made.

2.2.1.2 Permit to Operate

After the construction or modification is completed, the facility will be inspected by the APCA to verify that the actual construction is in accordance with the design and operating features included in the original or an appropriately amended Application. If the facility passes a non-operational inspection, a Permit to Operate will be granted. The non-operational inspection will consist of a site visit by a qualified member of the appropriate APCA. This individual shall be familiar with general engineering practice and the specific technologies utilized in minimizing air pollutant emissions.

In addition, the APCA may require the operator of the facility to substantiate, by the submission of data or conducting tests, whether the adequacy of his control equipment provides for the source meeting the requirements of the applicable rule or regulation. These data and tests will consist of stack sampling and/or continuous monitoring of emissions.

TABLE 2-1. GUIDELINES FOR MINIMUM PERMIT AND REGISTRATION REQUIREMENTS FOR PROCESS EQUIPMENT

Column 1 tabulates process rates which represent total emissions of 5 tons per year for the types of operations indicated. Process rates in excess of the specified rates require registration.

Column 2 tabulates process rates which represent emissions if uncontrolled in excess of 25 tons per year of $SO_x$ or particulates or 100 tons per year of $NO_x$, CO or hydrocarbons. Process rates in excess of the specified rates require permits.

| PROCESS DESCRIPTION | (Column 1) REGISTRATION PROCESS RATE | (Column 2) PERMIT PROCESS RATE |
|---|---|---|
| Dry Cleaning | | |
| Petroleum Solvents | 30 tons clothes cleaned/yr | 600 tons clothes cleaned/yr |
| Synthetic Solvents | 45 " " " " | 900 " " " " |
| Petroleum Storage | | |
| Fixed roof tanks storing gasoline or finished petroleum product | 60,000 gal - total storage<br>9,000,000 gal/yr - throughput | 1,000,000 gal - total storage<br>180,000,000 gal/yr - throughput |
| Fixed roof tanks storing crude oil | 90,000 gal - total storage<br>10,000,000 gal/yr - throughput | 1,800,000 gal - total storage<br>250,000,000 gal/yr - throughput |
| Floating roof tanks storing gasoline or finished petroleum product | Registration required for any single tank greater than 40 ft diameter | Permit required if greater than four (4) 100 ft diameter tanks or equivalent (Consult APCA) |
| Floating roof tanks storing crude oil | Registration required for any single tank greater than 45 ft diameter | Permit required if greater than four (4) 100 ft diameter tanks or equivalent (Consult APCA) |
| Gasoline Marketing | | |
| Assumes splash fill system - if submerged fill or other vapor return systems are used, these will be considered as control measures | 4,000,000 gal/yr - throughput | 8,000,000 gal/yr - throughput |
| Asphalt Batching Plants | 200 tons product/yr | 1000 tons product/yr |

TABLE 2-1. GUIDELINES FOR MINIMUM PERMIT AND REGISTRATION REQUIREMENTS FOR PROCESS EQUIPMENT (CONT'D.)

| PROCESS DESCRIPTION | (Column 1) REGISTRATION PROCESS RATE | (Column 2) PERMIT PROCESS RATE |
|---|---|---|
| Portland Cement Manufacture | | |
| Dry process | 150 barrels product/yr | 750 barrels product/yr |
| Wet process | 200 " " " | 1000 " " " |
| Note: one barrel of cement = 376 lbs | | |
| Concrete Batching | 50,000 cu yards concrete/yr | 250,000 cu yards concrete/yr |
| Stone Quarrying and Processing | | |
| Without tertiary crushing | 600 tons raw material/yr | 3000 tons raw material/yr |
| With tertiary crushing | 500 tons raw material/yr | 2500 tons raw material/yr |
| Incinerators | | |
| Municipal | 250 tons waste/yr | 1600 tons waste/yr |
| Industrial/Commercial | 400 tons waste/yr | 7000 tons waste/yr |
| Flue Fed | 100 tons waste/yr | 1600 tons waste/yr |
| Domestic Single Chamber | 20 tons waste/yr | 650 tons waste/yr |
| Pathological | 900 tons waste/yr | 6250 tons waste/yr |
| Ammonia Production | | |
| Plants with methanator | 30 tons ammonia/yr | 2000 tons ammonia/yr |
| Plants with CO absorber and regeneration system | 20 tons ammonia/yr | 600 tons ammonia/yr |
| Nitrate Fertilizers | | |
| With Prilling Tower | 700 tons product/yr | 3800 tons product/yr |
| With Granulator | 600 tons product/yr | 6500 tons product/yr |
| Copper Smelting | 7 tons concentrated ore/yr | 40 tons concentrated ore/yr |

TABLE 2-1. GUIDELINES FOR MINIMUM PERMIT AND REGISTRATION REQUIREMENTS FOR PROCESS EQUIPMENT (CONT'D.)

| PROCESS DESCRIPTION | (Column 1) REGISTRATION PROCESS RATE | (Column 2) PERMIT PROCESS RATE |
|---|---|---|
| Lead Smelting (Primary | 12 tons concentrated ore/yr | 75 tons concentrated ore/yr |
| Zinc Smelting | 7 tons concentrated ore/yr | 45 tons concentrated ore/yr |
| Secondary Lead Smelting | | |
| Pot Furnace | 12,500 tons processed/yr | 62,500 tons processed/yr |
| Reverberatory Furnace | 40 tons processed/yr | 360 tons processed/yr |
| Blast Furnace | 30 tons processed/y | 250 tons processed/yr |
| Rotary Reverberatory Furnace | 140 tons processed/yr | 700 tons processed/yr |
| Secondary Magnesium Smelting | 2500 tons processed/yr | 12,500 tons processed yr |
| Petroleum Refineries | | Permit decisions for all refineries will be based upon an analysis of each registered refinery by the Air Pollution Control Authority based upon the registration data submitted. |
| Fluid Catalytic Cracker Units (FCC) | 600 barrells feed/yr | |
| Moving Bed Catalytic Cracking Units (TCC) | 2500 barrels feed/yr | |
| Wood Pulping | 40 tons air dry unbleached pulp/yr | 300 tons air dry unbleached pulp/yr |
| Diesel Electric Generators | TBD* | TBD |

*To be determined.

TABLE 2-2. GUIDELINES FOR MINIMUM PERMIT AND REGISTRATION REQUIREMENTS FOR FUEL BURNING EQUIPMENT

Column 1 tabulates fuel burning rates which represent total emissions of 5 tons per year for the types of operations indicated. Fuel burning rates in excess of the specified rates require registration.

Column 2 tabulates fuel burning rates which represent emissions if uncontrolled in excess of 25 tons per year of $SO_x$ or particulates of 100 tons per year of $NO_x$, CO or hydrocarbons. Fuel burning rates in excess of the specified rates require permits.

| FUEL BURNING EQUIPMENT | (Column 1) REGISTRATION FUEL CONSUMPTION | (Column 2) PERMIT FUEL CONSUMPTION |
|---|---|---|
| Bituminous Coal Fired Equipment | | |
| Utility and large industrial boilers (greater than 100 x $10^6$ Btu/hr heat input) | 40 tons coal/yr | 300 tons coal/yr |
| Large commercial and general industrial boilers (10 to 100 x $10^6$ Btu/hr heat input) | 50 tons coal/yr | 350 tons coal/yr |
| Commercial and domestic furnaces (less than 10 x $10^6$ Btu/hr heat input) | 140 tons coal/yr | 1500 tons coal/yr |
| Handfired units | 60 tons coal/yr | 1500 tons coal/yr |
| Residual/Crude Oil Fired Equipment | | |
| Power Plants | 40,000 gallons oil/yr | 380,000 gallons oil/yr |
| Industrial and commercial-Residual oil fired | 5,000 gallons oil/yr | 380,000 gallons oil/yr |
| Distillate Oil Fired Equipment | | |
| Industrial and Commercial - Distillate Oil Fired | 50,000 gallons oil/yr | 400,000 gallons oil/yr |
| Domestic Equipment | 5,000 gallons oil/yr | 400,000 gallons oil/yr |

TABLE 2-2. GUIDELINES FOR MINIMUM PERMIT AND REGISTRATION REQUIREMENTS FOR FUEL BURNING EQUIPMENT (CONT'D.)

| FUEL BURNING EQUIPMENT | (Column 1) REGISTRATION FUEL CONSUMPTION | (Column 2) PERMIT FUEL CONSUMPTION |
|---|---|---|
| Natural Gas Fired Equipment | | |
| Power Plants | 20 million cu. ft gas/yr | 500 million cu. ft gas/yr |
| Industrial Process Boilers | 40 " " " " " | 1000 " " " " " |
| Domestic and Commercial Heating Units | 75 " " " " " | 2500 " " " " " |
| Gas Fired Turbines | 50 " " " " " | 1000 " " " " " |
| Gas Fired Engines for Oil and Gas Production | 10 " " " " " | 250 " " " " " |
| Gas Fired Engines for Gas Plants | 2 " " " " " | 45 " " " " " |
| Gas Fired Engines for Refineries | 2 " " " " " | 45 " " " " " |
| Gas Fired Engines for Pipelines | 1 " " " " " | 25 " " " " " |

If the operation of the facility is found to conform to the specifications of the permit, the Permit to Operate shall continue in effect and the facility will enter the routine source surveillance phase of the Permit System.

2.2.2 Permit Requirements - Existing Source

The procedure for including presently operating sources into the permit system requires the submission of an application for a Permit to Operate. The APCA may require that the application be accompanied by stack emission data, to ascertain whether the emission source is in compliance with the applicable Rules and Regulations of the State of Alaska. The criteria for determining which existing sources require permits are provided in Paragraph 2.2. Each existing source will be subject to routine surveillance as described in paragraph 2.2.1.3.

2.2.3 Conditional Permit to Operate

This type of Permit is for those existing sources which are not in compliance with the Rules and Regulations of the State of Alaska (or the appropriate local jurisdiction) which define the allowable pollutant emissions. This permit is granted only for a specified period of time and its issuance is subject to the following conditions:

a. If an existing source is in non-compliance with emission limitations and submits to the APCA a schedule of compliance showing specific actions to be taken according to a fixed time schedule which will, when completed, bring the source into compliance. If the schedule of compliance includes the installation of control equipment, then an Authority to Construct will also be required.

b. If an existing source exceeds any emission limitations due to the breakdown or failure of abatement equipment. Under these conditions, the APCA may issue a conditional permit. If the emissions are not satisfactorily reduced within a reasonable time frame, and if an extension in time is not deemed to be justified, the APCA may order a shutdown of the emission source.

c. A new or modified source which has applied for a Permit to Operate as described in paragraph 2.2.1.2 and inspection cannot be performed within a reasonable time. When a conditional permit is granted under these conditions, the APCA will arrange with the operator a mutually agreeable date for inspection which, if satisfactory, will culminate in a permanent Permit to Operate.

d. If an existing source has no practicable means known or available for the adequate prevention, abatement or control of air emissions. Under these conditions a Conditional Permit will be granted only until such time as such abatement or control technology becomes available.

In any case, the satisfactory completion of the emission reductions specified in the terms of the Conditional Permit to Operate will lead to the granting of a Permit to Operate. The APCA will conduct an inspection of the source prior to granting the Permit to Operate and may require the source operator to perform stack emission measurements or such other tests as may be required to determine pollutant emission levels. The APCA also has the option to require the installation of continuous in-stack monitoring equipment and periodic reports of the data collected by such instruments.

## 2.3 EXEMPTIONS

Registration, Authority to Construct or Permit to Operate shall not be required for:

1. Vehicles as defined by the Alaska State Vehicle Code, but not including any article, machine, equipment or other contrivance mounted on such vehicle that would otherwise require a permit under the provisions of these Rules and Regulations.
2. Vehicles used to transport passengers or freight.
3. Internal combustion engines, including gas turbine and jet engines, which are considered mobile sources.

## 3.0 PERMIT UNIT

A permit unit is defined as comprised of all the sources of atmospheric pollution emissions, whether from industrial process operations, fuel combustion, or solid waste disposal, located at a single identifiable site or facility. The owner or operator of the facility is required to submit an application to the APCA for the appropriate permit or authorization. This application and the subsequent permit or authorization will cover all emission sources located at the facility.

The process operations specified in Tables 2-1 and 2-2 are based upon the operation of only a single process or combustion unit at the facility. If two or more operations having pollutant emissions exist at the facility, then the estimated total emissions of all such operations will be used in determining the necessity of registration or permit application from the facility. If the source operator has any questions concerning the application of these definition or guidelines to his facility, he should contact the appropriate APCA. In all cases, the decision concerning the permit and the individual processes to be included in the permit will be made by the cognizant APCA.

## 4.0 REGISTRATION

The intent of Registration is to provide the APCA with information necessary to establish the nature and quantity of emissions. Specifically, the information required for registration will include:

a. Facility identification - name, address, ownership
b. Name, address and telephone number of principle contact
c. Nature of the Operation describing the type of combustion and/or process occurring
d. Operating schedule of the emission source
e. Type of fuel used, amount burned annually, heat content, sulfur and ash content, if applicable
f. Nature and efficiency of the emission control equipment, if any
g. Signature of responsible party
h. Amount of production rate or process throughput
i. Amount of material disposed of as solid waste and the type of such disposal
j. Nature and amount of emissions (or sufficient information from which to calculate emissions)
k. Stack parameters;
   height,
   diameter,
   exit gas temperature,
   exit gas velocity.

A sample copy of a Registration Form is presented in Appendix B.

A copy of the Registration Form must be submitted by each operator to the appropriate APCA for review and filing. The local APCA shall transmit one copy of the completed registration form to the Department of Environmental Conservation in Juneau for information purposes.

## 5.0 AUTHORITY TO CONSTRUCT - PERMIT TO OPERATE

For a given facility, a single application is required for Authority to Construct and/or a Permit to Operate. A sample of this form is shown in Appendix C.

The APCA may, when requested, assist applicants in compiling all necessary information required for such an application. However, operators generally will be encouraged to obtain the services of a professional engineer.

This application will be made by:

a. Existing sources requiring either a Permit to Operate or a Conditional Permit to Operate

b. New or modified sources requiring an Authority to Construct and a Permit to Operate.

The function of this application is to establish whether an existing source is meeting emissions standards at the time of submission of the application or whether a new or modified source will successfully meet such standards after the proposed construction is completed. The application requires the following information:

a. Facility identification - name, address, ownership

b. Nature of the operation - describing the type(s) of combustion and process source(s) and equipment.

c. Corresponding BTU ratings or process ratings or process rates, as applicable and the actual or intended usage rate.

d. Operating schedules

e. Type and amount of fuels used, heat content, sulfur content and ash content, if applicable

f. Type and efficiency of emission abatement equipment, if any

g. Estimate of nature and amount(s) of emissions

h. Stack parameters (height, diameter, exit gas temperature, exit gas velocity)

i. Process flow diagram, delineating where air pollutant emissions occur

j. Procedures for emission reduction during emergency episodes. (This requirement applies to all sources emitting 100 tons/year, or more of any one pollutant)

The signature on the application will constitute an agreement that the applicant assumes the responsibility for notifying the APCA of any alterations, additions or changes in operation he may decide to undertake.

Anapplication for a Conditional Permit must include a compliance schedule delineating periodic increments of progress which must be met at specific intervals. No periodic increment of progress may exceed 12 months.

The APCA has the right to waive or to request the Applicant to furnish any of the above or additional information necessary to evaluate the facility's effect on the air environment. The additional information will be requested within 15 days of the receipt of the Permit Application as stipulate by AS 46.03.160.

The applicant for a permit for new sources may be required to submit the following additional information:

a. Drawings and flow diagrams defining the layout, nature, and type equipment arrangement
b. Emission calculations or sufficient detailed information to permit the calculation of emissions
c. Calculations estimating the effect of emissions on the ambient air quality in the area of the source
d. Description of and a specification for the proposed emission abatement equipment
e. Stack emission testing upon start up
f. Stack monitoring and/or air quality monitoring instrumentation specifications.

With the exception of pollutant emissions data and estimates, all records and information supplied to the Department of Environmental Conservation or to the local APCA will be considered confidential in accordance with AS 46.03.180.

# 6.0 PROCESSING OF PERMIT APPLICATIONS

## 6.1 REVIEW

An Application for Authority to Construct and Permit to Operate will undergo a review by the APCA. The review process will provide a full documentation of all findings. Staff members review the applications will be engineers or personnel having experience in air pollution control.

Each Permit Application will be reviewed:

a. To insure that all basic information as stated in Section 5.0 has been provided.

b. To estimate emissions using available emission factors and the stated efficiency of the abatement equipment. If emission calculations are included with the application, these will be compared to the estimates.

c. To calculate allowable emissions using the emission limitations defined in the Rules and Regulations. These results will be compared to those of item b to determine whether the projected emissions are in excess of those permitted by the Regulations.

d. To estimate the air quality impact of a new facility. An allowable emission rate, based on air quality considerations will be calculated and compared to the results of items a and c.

e. To ascertain that the abatement procedures submitted for Emergency Episode Action provide acceptable degrees of emission reduction under adverse meteorological conditions.

f. To assure that compliance schedules, if applicable, provide for expeditious abatement of the air pollution problems with periodic increments of progress.

In accordance with Alaska schedule AS 46.03.160, the time limitation on the review process is 30 days.

## 6.2 APPROVALS

Within 30 days of receipt of the application it will either be approved, conditionally approved, or disapproved. If minor modifications are necessary, the applicant will be called in for consultation and changes may be agreed upon. For existing sources, a Conditional Permit will be issued if the compliance schedule and the proposed abatement equipment is found acceptable.

In order for a source to be issued an Authority to Construct or a Permit to Operate, the reviewer(s) must be satisfied that:

1. The source does, or will, conform to all emission standards as defined in the Administrative Code;
2. The construction and/or operation of the source will not cause ambient air quality standards to be exceeded;
3. The source has established a satisfactory emission reduction schedule for emergency episodes (if required).

THE APPROVAL OF ANY CONSTRUCTION OR MODIFICATIONS SHALL NOT AFFECT THE RESPONSIBILITY OF THE OPERATOR TO COMPLY WITH ALL APPLICABLE EMISSION LIMITATIONS OR OTHER AIR QUALITY CONTROL REGULATIONS.

## 6.3 REJECTIONS

An Authority to Construct or a Permit to Operate will be denied if the APCA determines that the application is not acceptable and cannot be negotiated into an acceptable form. The application with be denied in the following cases:

1. The facility cannot be built in the geographic area indicated because emissions from the facility, as designed, may degrade the air quality of the area to a level which exceeds the NAAQS.
2. The emission control systems or equipment designed or specified are unreliable or inadequate.
3. The emergency episode plan provisions are inadequate.
4. On-site stack sampling equipment, air monitoring equipment (if applicable) or sampling ports to be provided for inspection are inadequate for the purpose.
5. The submitted information has been improperly prepared to a degree that it cannot easily be corrected without total rewriting.
6. The application indicates that an applicable rule or regulation, or any portion of the applicable control strategy, may be violated by the source.

If an Authority to Construct is denied by the APCA, it shall also issue to the applicant a Prohibition Order against the construction of the facility, as designed. If a Permit to Operate is denied by the control agency it shall also issue a Prohibition Order against the operation of the facility, in accordance with AS 46.03.160(b) of the Laws of Alaska. If an

acceptable application is later received and approved by the APC officer, the Prohibition Order will be rescinded.

# 7.0 HEARINGS

Procedures for the appeal of the decisions of the Department of Environmental Conservation (DEC) in connection with the granting or denial of Permits to Operate, Compliance, Prohibition or Shutdown orders shall be in accordance with the Alaska Statutes 46.03.170 and 44.62.320.

# 8.0 SOURCE SURVEILLANCE

## 8.1 INSPECTION OF EXISTING FACILITIES

The nature and frequency of inspection of existing sources by the APCA will depend on the following factors:

- History of complaints against the facility
- Nature and amount of emissions from the facility
- Facility size and complexity
- History of violations
- Time required to conduct inspections
- The frequency and method(s) of stack measurements performed by the operator. The inspection process may include stack testing if determined necessary by the APCA.

The exact inspection schedule will be defined following the submission and review of the permit applications and will be submitted in the first semi-annual progress report. Inspection interval and type of inspection will be explicitly stated in this listing.

The APCA will maintain a list of facilities which are to be subjected to annual inspection. For other facilities, the APCA will establish an inspection schedule based on facility size and impact on the environmental of the facility. Those sources which have demonstrated that their abatement programs meet the Rules and Regulations with an adequate safety margin will be by-passed. Inspections responding to specific citizen complaints will be performed at any time.

The routine source surveillance will include submission of periodic reports by each source and routine inspections of the source by the APCA. Reports will be submitted every two years at a minimum, but the APCA may require annual or semi-annual reporting from major sources. Periodic reports may range from production reports and notification of unusual operations, abatement equipment breakdown, etc., to detailed emission monitoring data from the larger sources but will include, as a minimum, data on the nature and amounts of emissions.

If either the periodic reports or inspections indicate non-compliance with conditions specified by the Permit to Operate, the APCA will issue an Order to Comply. The APCA may also levy a fine against the facility depending on the previous record of the facility, the nature of the non-compliance, and whether it was known or unknown to the plant operator. This procedure represents the basic mechanism by which the APCA insures compliance with the emission limitations defined in the Regulations.

Inspectors, during the normal course of their activities, will observe any violations of the State or local ordinances regarding visible emissions. All violations noted will be brought to the attention of the source owner or operator and will be referred to the APCA for recording and possible prosecution.

During air pollution episodes, source inspection will be carried out by the appropriate APCA. These inspections will be principally designed to insure that pre-agreed emission reduction measures for each episode stage are being instituted by each major point source. Roving inspectors will also enforce community-wide restrictions and bans regarding open burning and incineration.

## 8.2 INSPECTION OF NEW AND MODIFIED FACILITIES

New and/or modified facilities will be inspected prior to the issuance of a Permit to Operate. The source's Authority to Construct will be used as a guide to the conduct of this inspection. A preoperational inspection will be carried out in all cases. This inspection will focus on a visual examination of the facilities and the installed abatement equipment. If the APCA determines that the preoperational inspection does not conclusively indicate that the source can be operated in compliance with the applicable emission limitations, a further post-operational test will be required before issuance of a Permit to Operate. These tests may include stack emission measurements (carried out either by the APCA or by the operator of the source under APCA direction) and/or any other data which the APCA deems necessary to properly evaluate the air pollution impact of the source. After satisfactory completion of the inspection, the new or modified source will be granted a Permit to Operate and will be inspected and monitored according to the provisions outlined in the previous section.

## 8.3 SUBMISSION OF DATA FROM OPERATOR INSTALLED MONITORING EQUIPMENT

Any source which is required to maintain and operate emission measurement instrumentation and/or air quality measurement instruments as part of their requirement to obtain a Permit to Operate will submit the measured data to the Department of Environmental Conservation (DEC) on a semi-annual basis. The operator of each source will be obligated to report immediately and correct all emissions which were measured to be excessive. The operator's air quality measurement instrumentation will become part of the statewide air surveillance network and will be operated in accordance with the sampling methods and schedule of the statewide system. All data received from such instrumentation must be made available to the DEC on a periodic basis, subject to negotiation. However, the operator must notify the DEC immediately of any degradation of air quality as determined by the operator's instrumentation.

# 9.0 AIR QUALITY CONTROL JURISDICTIONS

## 9.1 STATE AGENCY RESPONSIBILITIES

The Department of Environmental Conservation (DEC) will assume primary responsibility for all emission sources located outside the jurisdiction of any local agency. This responsibility will include the administration of the permit and registration system and the conduct of source surveillance and inspection procedures.

The DEC will also assume responsibility for the permiting and control of State or Federal facilities located within local jurisdictions, should the local APCA request such assistance. In the case of Federal facilities, the DEC will call upon the appropriate area of the Environmental Protection Agency, if a satisfactory cooperative relationship cannot be developed at the State level.

The DEC has the responsibility to review and monitor the operation of local agencies. The nature of the review and the depth of the review process will vary with each situation and will depend on:

1. The type of source and the nature and amount of pollutants;
2. The meteorological, topographic and air quality characteristics of the location in which the existing source is operating or for which the new source is planned.

The DEC will assume primary responsibility for the administration of the permit system within the jurisdiction of a local agency, should it become necessary. This authority is granted to the DEC in AS 46.03.220 of the Laws of Alaska in cases where:

1. The local air pollution control program is determined by public hearing to be inadequate;
2. The control of a particular class of air contaminant source is determined to be beyond the capabilities of the local agency because of the complexity or magnitude of the source.

In addition, the DEC when necessary will assist the local agencies in all practical and reasonable ways in administering the permit system. This assistance will most likely be technical in nature and may include the following:

1. Source inspection and test assistance;
2. Consultation or evaluation of new sources/.

## 9.2 LOCAL AGENCY RESPONSIBILITIES

In accordance with Alaska Statute AS 46.03.210, areas with a population in excess of 1,000 and organized as boroughs may establish pollution control programs.

All local agencies have the following primary responsibilities with regard to the Permit System. For all sources in their jurisdiction, they will:

1. Register all sources requiring registration by the State of Alaska ;
2. Process, review, and approve applications for Authority to Construct and Permit to Operate ;
3. Inspect sources ;
4. Process and monitor Conditional Permits to Operate .

A local agency may deviate from any of the features of the Permit System defined by the State of Alaska,herein,if such deviation is fully negotiated with the Department of Environmental Conservation and formally agreed to by both parties. The local agency is, however, obligated to transmit to the DEC copies of all data submitted to it as part of the implementation of its Permit System.

# 10.0 DATA MANAGEMENT

## 10.1 DATA TYPES

Data types within the Permit System can be classified as Primary or Secondary. The Primary Data consist of Registration Forms, Applications for Authority to Construct and Permit to Operate and portions of supplemental data in support of the Application. These supplemental data may consist of:

- Facility Description and Layout
- Emission Calculations
- Air Quality Calculations
- Stack Measurement Data
- Compliance Schedules
- Stack Parameter Values
- Descriptions of Provisions for Stack Sampling
- Descriptions of Stack Monitoring Equipment
- Descriptions of Air Quality Monitoring Equipment
- Design Specifications for Abatement Equipment
- Abatement Procedures for Emergency Episodes.

## 10.2 DATA HANDLING

To assure adequate control and access to all available data, a central depository needs to be established for all primary and secondary data. This depository shall be established at the offices of the Department of Environmental Conservation in Juneau, Alaska. Local agencies shall routinely contribute to this data bank by transmitting copies of all registration and permit applications. A manaul system can accommodate the initial requirement of storing a copy of the application and maintaining a simplified system of tracking the application and its related documents through the permit-granting process.

Data generated by a Permit will be used in future state-wide emission inventories, air quality control and projections. Thus, it is desirable that Permit System data be readily accessible and in a usable form as a

possible data input in modeling studies, comparative analyses, and as a source for specific control procedures during emergency episodes.

The intent of the data handling procedures set forth in this description is to describe a method of manual operations, yet allow the basic structural and procedural flexibility for a possible transition to computerized phases of operation.

Data documentation will fall into four types of data packages dealing with:

1. Registration;
2. Applications for Authority to Construct and Permit to Operate;
3. Issued Authorities to Construct (pending review for Permit to Operate);
4. Issued Permits to Operate (Routine Permit System Operation).

The files associated with each category are shown in Figure 10-1. A description of each file follows. Registration forms will be placed in a Master File arranged in alphabetical order and by Air Quality Control Region.

10.2.1 Application for Authority to Construct and Permit to Operate Category

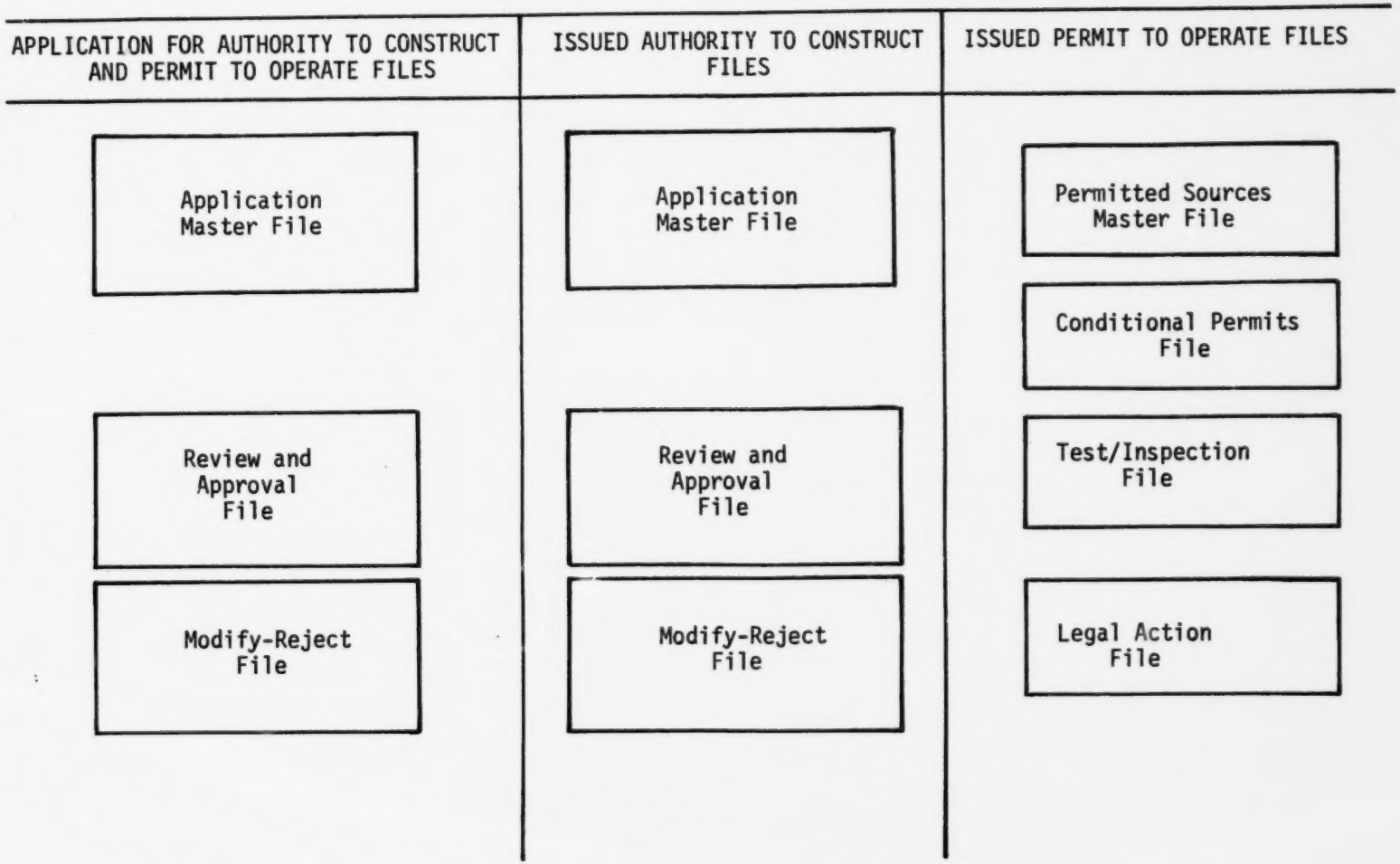
- Application Master File

  This file contains a copy of each original application and associated Primary Data. All actions, until issuance of an Authority to Construct, or a Permit to Operate, are recorded in this file to maintain a current status of the application. Each application is filed alphabetically-chronologically by the name of the company and date of application. Any action through the permit-granting process is updated in this master file. After issuance of Authority to Construct, or Permit to Operate, the application is transferred to the "Issued Authority to Construct", or "Issued Permit to Operate" category. An Application Master File will be maintained by each APCA.

- Review and Approval File

  This file is primarily a control device to assist the engineering personnel in shceduling applications for review. It contains only the name of the applicant, date of application, and date of the scheduled review. After approval or disapproval, the information is purged from the file.

Figure 10-1. PERMIT SYSTEM DATA FILES



- Modify-Reject File

This file is maintained in order to have ready access to the number of modifications and rejections and the reasons for them. Only the applicant's name, date of application, date of the APCA conclusions, and the word "modify" or "reject" need appear. Details of the review can be obtained from the Application Master File since all actions affecting an application update this file. The Modify-Reject File should assist in ready access of information when special tests and/or inspections are required and, in addition, in any legal action processes. The file may be purged after an applicant has resubmitted an application and received approval.

10.2.2 Issued Authority to Construction Category

- Application Master File

When the Authority to Construct is granted, the application is sent to the Application Master File in the "Issued Authority to Construct" category, where a copy is maintained. All actions, until issuance of a permit, are recorded in this file, giving a current status of the application. Each application is filed alphabetically-chronologically by the name of the company and the date of application. Any action through the permit-granting process is updated in the Master File. After issuance of a Permit to Operate, the application with all updates and date of permit issuance is transferred to the "Issued Permit to Operator." category.

- Review and Approval File

This file operates in exactly the same manner as the Review and Approval File described in paragraph 10.2.1.

- Modify-Reject File

This file operates in exactly the same manner as the Modify-Reject File described in paragraph 10.2.1.

10.2.3 Issued Permits to Operate Category

- Permitted Sources Master File

This file is created by the transfer of applications, and all Secondary data, from the Application Master File in the "Issued Authority to Construct" Category upon issuance of a Permit to Operate. The data is filed alphabetically by company name; indicating site location, Standard Industrial Classification (SIC) number, and process type. The Master File becomes the permanent record of all sources operating with permits. It contains periodic test results, inspection reports and evaluations which may lead to legal actions due to non-compliance with regulations. Purging

of this file would occur when a need for a new permit arises, e.g., change of ownership or expiration of the old permit.

- Conditional Permit File

  Conditional Permits to Operate are contained in this file during the period in which they are in force. The same information is contained in this file as in the Permited Sources File with the addition of a compliance schedule which must be submitted before this Permit is issued. As Conditional Permits to Operate expire and compliance with the regulations is achieved, sources will be removed from this file and placed in the Permited Sources Master File.

- Test/Inspection File

  This file contains the name of the company due for emissions testing and/or inspection, the date of issuance of a Permit to Operate, and the scheduled date for the test and/or inspection. It is used in field operations and contains all appropriate Secondary data. The APCA may develop inspection schedules based on the date of permit issuance. The registrant would be purged from the file only if his permit was revoked.

- Legal Action File

  This file contains only the name of the registrant and a few words describing pending legal action. (Examples of these words would be: "Fine ","Shutdown", or "Order to Reduce Emissions".) Details of the legal action can then be obtained from the Registrant Master File.

## 10.3 AUTOMATED INFORMATION SYSTEMS

The Alaska Air Pollution Permit System will be run, at least initially, on a manual basis. However, depending on the extent of future development, it may eventually be advisable to convert to a computerized information system.

## 11.0 IMPLEMENTATION SCHEDULE

The Permit System will be put into effect a month after EPA approval of the Implementation Plan. All major sources will be contacted by mail with an enclosed Permit Application and a copy of the Rules and Regulations. The Permit Applications will be reviewed and as required Conditional Permits to Operate will be granted to sources not in compliance with the emission requirements. Compliance schedules will begin on January 1, 1972 and will continue at a maximum, through the end of 1974. A typical compliance schedule, requiring the installation of abatement equipment, will include several significant milestones by which the APCA may measure progress toward completion.

The point source registration program will begin in the fall of 1973 and is expected to take about four months.

Full compliance of all point sources with the Rules and Regulations of the State will occur by Spring of 1975.